

ABSTRACT

[0074] Artificial Neural Net (ANN) coupled with an Expert System (ES) which monitors production test plans in real-time is provided. The ANN recognizes and classifies production yield patterns occurring at individual tester, complete test stage, and production line test aggregation and executes a proscribed range of responses. The ANN will automate human statistical analysis and line monitoring functions, identify emerging yield trends, identify proximate cause of a yield-degrading event, classify event severity, and provide conclusional accuracy. The ES, based on recognized or inferred conditions provided by the ANN, consults it's knowledge base and applies cognitive heuristics to execute responses in the manner described by the human expert it is modeled after. These responses may include a summary report electronically to the correct individuals, a voice/pager message to the individuals responsible to react to an event, a visual or audible alarm at the event site, and/or direct adjustment of the production process